PATENT
P56992

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

BYOUNG-CHUL KIM *et al.*

Serial No.:	~~*to be assigned*~~ 10/724,085	Examiner:	~~*to be assigned*~~ P.Tran
Filed:	21 November 2003	Art Unit:	~~*to be assigned*~~ 2155
For:	DYNAMIC MANAGEMENT METHOD FOR FORWARDING INFORMATION IN ROUTER HAVING DISTRIBUTED ARCHITECTURE		

INFORMATION DISCLOSURE STATEMENT

Mail Stop: Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with 37 C.F.R. §1.56, and §§1.97 and 1.98 as amended, Applicant cites and provides copies of the following art references:

1. U.S. Patent No. 6,643,292 to Chapman *et al.*, entitled *EFFICIENT PACKET DATA TRANSPORT MECHANISM AND AN INTERFACE THEREFOR*, issued on 4 November 2003;

2. U.S. Patent No. 6,584,093 to Salama *et al.*, entitled *METHOD AND APPARATUS FOR AUTOMATIC INTER-DOMAIN ROUTING OF CALLS*, issued on 24 June 2003;

3. U.S. Patent No. 6,574,669 to Weaver, entitled *METHOD AND APPARATUS FOR ROUTING TRAFFIC WITHIN A NETWORK UTILIZING LINEAR OPTIMIZATION*, issued on 3 June 2003;

4. U.S. Patent No. 6,473,408 to Rochberger *et al.*, entitled *BUILDING A HIERARCHY IN AN ASYNCHRONOUS TRANSFER MODE PNNI NETWORK UTILIZING PROXY SVCC-BASED RCC ENTITIES*, issued on 29 October 2002;

5. U.S. Patent No. 6,456,600 to Rochberger *et al.*, entitled *COMPLEX NODE REPRESENTATION IN AN ASYNCHRONOUS TRANSFER MODE PNNI NETWORK*, issued on 24 September 2002;

6. U.S. Patent No. 6,400,681 to Bertin *et al.*, entitled *METHOD AND SYSTEM FOR MINIMIZING THE CONNECTION SET UP TIME IN HIGH SPEED PACKET SWITCHING NETWORKS*, issued on 4 June 2002;

7. U.S. Patent No. 6,006,216 to Griffin *et al.*, entitled *DATA ARCHITECTURE FOR FETCH-INTENSIVE DATABASE APPLICATIONS*, issued on 21 December 1999;

8. U.S. Patent No. 5,629,930 to Beshai *et al.*, entitled *CALL ROUTING IN AN ATM SWITCHING NETWORK*, issued on 13 May 1997;

9. U.S. Patent No. 6,449,354 to Scott *et al.*, entitled *COMMUNICATION SYSTEM, ARTICLE AND METHOD OF CONFIGURING AND ESTABLISHING A CONNECTION THEREIN*, issued on 10 September 2002;

10. BGP Table Data of Active BGP Entries and BGP Reports, Report last updated at Tue, 25 Nov 2003 4:1:12 UTC+1100, http://bgp.potaroo.net/

11. U.S. Patent No. 6,505,228 to Schoening *et al.*, entitled *DYNAMIC DETERMINATION OF EXECUTION SEQUENCE*, issued on 7 January 2003;

12. U.S. Patent No. 5,959,968 to Chin *et al.*, entitled *PORT AGGREGATION PROTOCOL*, issued on 28 September 1999;

13. U.S. Patent No. 6,061,349 to Coile *et al.*, entitled *SYSTEM AND METHOD FOR IMPLEMENTING MULTIPLE IP ADDRESSES ON MULTIPLE PORTS*, issued on 9 May 2000;

14. U.S. Patent No. 6,085,186 to Christianson *et al.*, entitled *METHOD AND SYSTEM USING INFORMATION WRITTEN IN A WRAPPER DESCRIPTION LANGUAGE TO EXECUTE QUERY ON A NETWORK*, issued on 4 July 2000;

15. U.S. Patent No. 6,102,969 to Christianson *et al.*, entitled *METHOD AND SYSTEM USING INFORMATION WRITTEN IN A WRAPPER DESCRIPTION LANGUAGE TO EXECUTE QUERY ON A NETWORK*, issued on 15 August 2000;

16. U.S. Patent No. 6,529,959 to Armistead *et al.*, entitled *METHOD AND APPARATUS FOR AUTOMATIC ROUTING OF CIRCUIT SWITCHED DATA CONNECTIONS BASED UPON STORED BEHAVIORAL INFORMATION*, issued on 4 March 2003;

17. U.S. Patent No. 5,509,006 to Wilford *et al.*, entitled *APPARATUS AND METHOD FOR SWITCHING PACKETS USING TREE MEMORY*, issued on 16 April 1996;

18. U.S. Patent No.6,650,641 to Albert *et al.*, entitled *NETWORK ADDRESS TRANSLATION USING A FORWARDING AGENT*, issued on 18 November 2003;

19. U.S. Patent No. 6,298,061 to Chin *et al.*, entitled *PORT AGGREGATION PROTOCOL,* issued on 2 October 2001;

20. U.S. Patent No. 6,546,420 to Lemler *et al.*, entitled *AGGREGATING INFORMATION ABOUT NETWORK MESSAGE FLOWS*, issued on 8 April 2003; and

21. U.S. Patent No. 6,339,595 to Rekhter *et al.*, entitled *PEER-MODEL SUPPORT FOR*

VIRTUAL PRIVATE NETWORKS WITH POTENTIALLY OVERLAPPING ADDRESSES, issued on 15 January 2002.

DISCUSSION

Chapman *et al.* U.S. '292 suggests a packet transport network with a plurality of routing nodes, each having a routing table, for routing transport packets through routing links, and a plurality of transport access interfaces each of which has an address table correlating destination of the customer digital data with addresses of transport access interfaces. Interface includes an encapsulation module for encapsulating one or more of the identified incoming digital data flows into a stream of transport packets.

Salama *et al.* U.S. '093 assumes a valid IP telephone destination address, and selects the best path towards the destination address, by advertizing the accessability of the IP telephone addresses and the costs associated with access, and selects the best rout towards a particular IP telephone designation with a Border Gateway Protocol providing a mechanism for exchanging IPv4 routing information.

Weaver U.S. '669 links routing traffic within a network including a plurality of nodes coupled by links, with a linear optimization operation that uses a set of metrics to determine respective traffic flow values.

Rochberger *et al.* U.S. '408 contemplates a dedicated computer with a step of configuring the dedication of the computer to perform calculations of logical group node, including the complex node representation calculations at all levels in the hierarchy, or changes in any child peer groups

that cause the recalculation of the complex logical group node do not consume computing resources from any non-dedicated switches that continue to create and delete switched virtual circuit (SVCs).

Rochberger *et al.* U.S. '600 suggested the method of calculating a complex node representation for logical node in a hierarchical peer group in a PNNI based ATM network, using average to determine the summary information used in a representation of the complex nodes. A list of all border nodes in the peer group is generated, and maintained in order to generate a matrix of table, with one table for each metric per class of service. The table is populated by the best value associated with the corresponding metric for a particular pair of border nodes within a particular class of service. The default spokes a determined, exceptions and bypasses are calculated.

Bertin *et al.* U.S. '681 suggests a high speed, highly dynamic network using a path selection algorithm embodying to minimize the connection set-up delay in access nodes. Pre-calculated path is removed from the routing database after predetermine period of time has path without selection of the removed path.

Griffin *et al.* U.S. '216 mentions a data organization used to meet specific requirements of fetch-intensive (OLFP) database applications maintained in at least two logical databases. The databases, with OLFP applications update transactions directed to the first logical database and OLFP application read transaction directed to the second logical databases. The first databases substantially normalized.

Beshai *et al.* U.S. '930 contemplates selection of candidate route path from the originating node to the destination node and if no direct route paths are available, selecting two-link route path in an ATM network having a plurality of nodes with each node having one message queue for each

of its outgoing links and candidate table containing a list of candidate route path, with each node performing independently from each other without conflict.

Scott *et al.* U.S. '354 provides a call server for overseen connection between a call and node providing a connection interface, by establishing a routing object index associated with an object in response to a first configuration message and storing an information containing the first configuration message as a partial object.

Schoening *et al.* U.S. '228 stores a directed acyclic graph in memory, with acyclic graph including a plurality of nodes and each node comprising information representing one of a "precondition value" that in term, is associated with "a time of execution value indicating that the first executable component is to be executed upon request by an external process." The final order of execution is "based on an order in which the nodes are traversed."

Chin *et al.* U.S. '968 discusses dynamic aggregation of redundant links between two neighboring devices in a computer network through the exchange of aggregation protocol data unit frames (AGPDU) between the two devices. The Exchange of AGPDU frames allows neighboring devices to determine whether they are interconnected by redundant links and to identify corresponding ports. Each device may then dynamically aggregate the corresponding ports into an aggregation port (agport) which appears as a signal, logical, high-bandwidth port or interface to other processes executing on the device.

Coile *et al.* U.S. '349 provides a packet interceptor that is operative to intercept incoming packets received at the client interface which have a packet destination IP address and a packet destination port number corresponding to a virtual machine IP address and a virtual port number

supported by the packet translation system. The server port runs a real process corresponding to a virtual process simulated on the virtual port number.

Christianson *et al.* U.S. '186 and U.S. '969 disclose a Galaxy search engine used to provide a personalized network robot that serves as user's intelligent assistant by tracking available network information sources.

Armistead *et al.* U.S. '959 mentions a call control system for routing multi-link connections with a first switch supporting a multi-link connection with an originating client, the server coupled to a second switch of the network configured to support a multi-link connection with the terminating client, and the routing processor coupled to the network to store data entry identifying the originating client as a potential source of a multi-link connection.

Wilford *et al.* U.S. '006 discloses a tree program generator that converts information from routing table in a high-level memory into functional subsections called "substrees" and the tree memory, each of which may parse and recognize a portion of each packet. In one embodiment, the tree memory as a static section and a dynamic section, and a dynamic section contains information relating to routing and other information such as access control about the networks to which a switch is coupled, and the dynamic section may be dynamically generated and placed into the tree memory in response to network information that the switch gleans from the network. The high-level processor may occasionally generate a new set of tree memory instructions in response to the routing table, and place the new set of tree memory instructions into the tree memory. The tree program generator may divide the tree memory into the set of functional subtrees.

Albert *et al.* U.S. '641 provides a service manual that performs network address translation

by sending a wildcard affinity to the forwarding agent that attracts packets having a protocol, a source address, destination address, source port or a destination port that is to be translated.

Chin *et al.* U.S. '061 provide a port aggregation protocol for dynamically aggregation redundant links connecting two neighboring devices through the exchange of novel aggregation protocol data unit frames between the devices. Upon receipt of an AGPDU frame, one ports state machine engine attempts to aggregate the port by interrogating the device's other ports to determine which, if any, are also directly coupled to the neighboring device.

Lemler *et al.* U.S. '420 discloses a process for aggregation based upon matching aggregation key source devices, destination device and destination port.

Rekhter *et al.* U.S. '595 discloses virtual-router approaches and endeavor to improve upon the virtual private network approach through "a judicious use of packet tagging" with the virtual private network-specific routing.

The citation of the foregoing references is not intended to constitute an assertion that other or more relevant art does not exist. Accordingly, the Examiner is requested to make a wide-ranging and thorough search of the relevant art.

No fee is incurred by this Information Disclosure Statement.

Respectfully submitted,

R. E. Bushnell

Robert E. Bushnell
Reg. No.: 27,774

1522 "K" Street, N.W., Suite 300
Washington, D.C. 20005
Area Code: 202-408-9040

Folio: P56992
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I.D.: REB/asc

INFORMATION DISCLOSURE STATEMENT	SERIAL NUMBER 10/724,085 ~~to be assigned~~	DOCKET NO. P56992
PTO-1449 (PAGE 1 OF 1)	APPLICANT BYOUNG-CHUL KIM *et al.*	
	FILING DATE December 1, 2003	GROUP 2155 ~~to be assigned~~

U.S. PATENT DOCUMENTS

EXAMI	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE
/PT/	6,643,292	11/03	Chapman *et al.*			
	6,584,093	06/03	Salama *et al.*			
	6,574,669	06/03	Weaver			
	6,473,408	10/02	Rochberger *et al.*			
	6,456,600	09/02	Rochberger *et al.*			
	6,400,681	06/02	Bertin *et al.*			
	6,006,216	12/99	Griffin *et al.*			
	5,629,930	05/97	Beshai *et al.*			
	6,449,354	09/02	Scott *et al.*			
	6,505,228	01/03	Schoening *et al.*			
	5,959,968	09/99	Chin *et al.*			
	6,061,349	05/00	Coile *et al.*			
	6,085,186	07/00	Christianson *et al.*			
	6,102,969	08/00	Christianson *et al.*			
	6,529,959	03/03	Armistead *et al.*			
	5,509,006	04/96	Wilford *et al.*			
	6,650,641	11/03	Albert *et al.*			
	6,298,061	10/01	Chin *et al.*			
	6,546,420	04/03	Lemler *et al.*			
/PT/	6,339,595	01/02	Rekhter *et al.*			

	FOREIGN PATENT DOCUMENTS					TRANSLATION	
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	YES	NO

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, etc.)*

/PT/	*BGP Table Data of Active BGP Entries and BGP Reports, Report last updated at Tue, 25 Nov 2003 4:1:12 UTC+1100, http://bgp.potaroo.net/*

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP §609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

/Philip Tran/ 05/08/2008